



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,104	04/13/2004	Ryoichi Matsuoka	S004-4722(DIV)	4518

7590 06/06/2006

Bruce L. Adams
Adams & Wilks
31st Floor
50 Broadway
New York, NY 10004

EXAMINER

BOWERS, BRANDON

ART UNIT	PAPER NUMBER
----------	--------------

2825

DATE MAILED: 06/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,104

Applicant(s)

MATSUOKA

Examiner

Brandon W. Bowers

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Objections

Claims 4 and 6 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 2 is a method claim, however claims 4 and 6 are written as if claim 2 was an apparatus claim. It is uncertain whether these claims are intended to be dependent on claim 3 or whether they were improperly written in apparatus format. For the purposes of this rejection, they are being treated as though they are meant to be dependent on claim 3.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Art Unit: 2825

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,757,875.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the methods described in claims 1-2 of the instant application are substantially similar to claims 1-10 of the above named patent that one skilled in the art at the time of invention would recognize them to be obvious variations of the same inventive concept..

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Garza, US Patent No. 6,078,738. Garza teaches a method comprising storing design CAD data of an IC device formed on an IC wafer and reading the design CAD data of a pattern of the IC device and superimposing the design CAD data with an electron microscope image

Art Unit: 2825

of the pattern formed on the IC wafer (Figure 7 and column 3, line 54 to column 4, line 29).

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Balasinski et al., US Patent No. 6,562,638. Balasinski teaches a method comprising storing design CAD data of an IC device formed on an IC wafer and reading the design CAD data of a pattern of the IC device and superimposing the design CAD data with an electron microscope image of the pattern formed on the IC wafer (Figures 5 and column 5, line 32 to column 6, line 6).

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al., US Patent No. 5,530,372. Lee teaches a method comprising storing design CAD data of an IC device formed on an IC wafer and reading the design CAD data of a pattern of the IC device and superimposing the design CAD data with an electron microscope image of the pattern formed on the IC wafer (Figure 3 and column 1, line 60-column 2, line 38).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mei et al, US Patent No 6,493,867 in view of Balasinski et al., US Patent No. 6,562,638.

In reference to claims 2 and 3, Mei teaches storing CAD data of an IC device formed on an IC wafer, scanning a first pattern formed on an IC wafer, comparing the CAD data of first pattern against the scanned wafer, and comparing a second pattern which is formed at a later step against the against the scanned wafer (Column 4, line 6 to column 8, line 7). Mei does not teach wherein the comparings are done by overlapping the first and second design CAD images with the electron microscope image. Balasinski teaches overlapping design CAD images with the electron microscope images. Accordingly, it would have been obvious for one skilled in the art at the time of invention to incorporate the teachings of Balasinski for overlapping design CAD images with the electron microscope images into the teachings of Mei for storing CAD data of an IC device formed on an IC wafer, scanning a first pattern formed on an IC wafer, comparing the CAD data of first pattern against the scanned wafer, and comparing a second pattern which is formed at a later step against the against the scanned wafer to make a method and apparatus comprising storing design CAD data of an IC device formed on an IC wafer, reading the design CAD data of a first pattern of the IC device and superimposing the design CAD data with an electron microscope image of the first pattern formed on the IC wafer, and further superimpose the design CAD data of a second pattern that is formed later and related to the first pattern because linking of design CAD data and aerial images facilitates navigation around the chip.

In reference to claim 4, Balasinski teaches sampling a contour line segment of the aerial images (column 5, lines 47 – column 6, line 6).

Claims 5 and 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Mei et al, US Patent No 6,493,867 and Balasinski et al., US Patent No. 6,562,638 as applied to claims 3 and 4 above, and further in view of Lee et al., US Patent No. 5,530,372.

Mei and Balasinski do not teach a navigation apparatus comprising means for providing a low magnification microscope image by controlling a stage based on position information, means for calculating a deviation amount by information of a CAD line segment and a matching processing on the low magnification microscope image in order to catch a pattern image of a predetermined portion at a center of the field of vision by a microscope having a high magnification. Lee teaches a navigation apparatus comprising means for providing a low magnification microscope image by controlling a stage based on position information, means for calculating a deviation amount by information of a CAD line segment and a matching processing on the low magnification microscope image in order to catch a pattern image of a predetermined portion at a center of the field of vision by a microscope having a high magnification (Figure 3 and column1, line 60-column 2, line 38). Accordingly, it would have been obvious for one skilled in the art at the time of invention to incorporate the teachings of Lee toward a navigation apparatus comprising means for providing a low magnification microscope image by controlling a stage based on position information, means for calculating a deviation amount by information of a CAD line segment and a matching processing on the low magnification microscope image in order to catch a pattern image

Art Unit: 2825

of a predetermined portion at a center of the field of vision by a microscope having a high magnification with the teaches of Mei and Balasinski as described above in claims 3 and 4 because it facilitates navigation around the chip.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon W. Bowers whose telephone number is (571)272-1888. The examiner can normally be reached on 8:30 am until 5:00 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on (571)272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BWB


JACK CHIANG
SUPERVISORY PATENT EXAMINER